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Mr. T. Fisher Unwin :—"Nature Studies by Night and Day," by F. C. Snell; and "Health at its Best *v.* Cancer and other Diseases," by R. Bell.

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Messrs. Williams and Norgate :—"The Surgical Anatomy of the Horse," by J. T. S. Jones, part iii., illustrated; and a new edition of "Principles and Practice of Agricultural Analysis: a Manual for the Study of Soils, Fertilisers, and Agricultural Products," by H. W. Wiley, vol. ii.

Messrs. Witherby and Co. :—"Three Voyages of a Naturalist: being an Account of many Little-known Islands in Three Oceans visited by the *Valhalla*, R.Y.S.," by M. J. Nicoll, with an introduction by the Right Hon. the Earl of Crawford, K.T., F.R.S., illustrated.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

CAMBRIDGE.—There is a desire on the part of the biologists of Cambridge to celebrate in 1909 the centenary of Darwin's birth and the jubilee of the publication of the "Origin of Species" by endeavouring to found a chair of biology, the occupant of which shall devote himself to those subjects which were the chief concern of Darwin's life-work. It is probable that this will be accomplished; for the council of the Senate has had under consideration a generous offer of support made by a member of the University who wishes to remain anonymous.

Convinced of the great importance of the subjects with which such a professorship would be concerned, the benefactor offers to pay to the University 300*l.* a year for five years, provided that the University establishes for that period, and before June 30, 1908, a professorship of biology of the minimum annual value of 500*l.*

The donor also offers to increase the 300*l.* to 400*l.* for any portion of the five years during which the professor may be holding a professorial fellowship. The further condition is made that it shall be the duty of the professor or professors elected during the period of five years above mentioned to teach and make researches in that branch of biology now entitled genetics (heredity and variation).

The author of this offer further suggests, though he does not make it a condition, that the proposed temporary professorship, if established, should be entitled the "Darwin Professorship of Biology." The council of the Senate, while giving full weight to this suggestion, inclines to the view that it would be more expedient to reserve such a title until it shall have become clear that the professorship can, from whatever source, be placed on a permanent footing.

The council is of opinion that the generous offer anonymously made should be accepted, and that a professorship of biology of the value of 700*l.* per annum should be established, which will terminate at the end of the Easter term, 1913, unless the University shall previously have otherwise determined. The electors to the professorship shall, so long as the professorship is only temporary, be the council of the Senate, but if the professorship shall be made permanent a board of electors shall be constituted.

It is proposed to make a grant of 30*l.* from the Worts fund to Mr. A. R. Hinks, of Trinity College, towards defraying his expenses in travelling on the continent of Europe with the view of investigating the methods used in the study of astronomy and geodesy in certain observatories and institutions.

It is proposed to continue for a further period of five years, from Michaelmas, 1908, the Caley and Stokes lectureships in mathematics, the annual stipend of 200*l.* being attached to each lectureship. The general board is of opinion that, should the endowments for these two lectureships prove to be insufficient to provide these stipends, the University should undertake to make up for the five years any deficiency which may result from this insufficiency. This may involve a contribution from the University of 80*l.* a year.

Mr. C. A. Barber and Mr. A. W. Rogers have been approved by the general board of studies for the degree of Doctor in Science.

The syndicate appointed to obtain plans and estimates for the extension of the chemical laboratory has issued a second report, in which it is stated that last August a contract was signed by the builder for erecting the building, which is now rising in Pembroke Street, at a cost of 13,750*l.* The syndicate now asks leave of the Senate to expend a sum of 485*l.* for extras in the building, 2455*l.* for benches, lecture tables, and other fittings, and 700*l.* for instruments and apparatus.

London.—The degree of D.Sc. in chemistry has been granted to Mr. R. J. Caldwell, an internal student of the Central Technical College. Mr. Caldwell presented a thesis entitled "A.—Studies of the Processes Operative in Solutions, part i., the Sucroclastic Action of Acids as influenced by Salts and Non-electrolytes; B.—The Hydrolysis of Sugars," and other papers.

The degree of D.Sc. in zoology has been granted to Mr. D. H. de Souza, an internal student of University College. Mr. de Souza presented a thesis entitled "The Activation of Pancreatic Juice."

The death is announced of Prof. Laurent, professor of mathematical analysis in the Paris École polytechnique and Institut national agronomique.

Miss E. N. Thomas, assistant in the department of botany, University College, has been appointed lecturer and head of the department of botany, Bedford College for Women.

M. Camille Matignon has been appointed professor of mineral chemistry at the Collège de France in succession to M. H. Le Châtelier, who recently accepted the chair of general chemistry at the Sorbonne.

The governing body of the Imperial College of Science and Technology has appointed as secretary Mr. Alexander Gow, formerly scholar of Gonville and Caius College, Cambridge, who for the last four years has occupied the position of director of education and principal of the Technical School, Blackburn.

In the House of Commons on Monday Mr. Ramsay Macdonald asked the President of the Board of Education whether he proposed to appoint a Royal Commission to inquire into the constitution of the University of London, with a view to the University taking over the Imperial School of Science and Technology, or whether, in the event of no such commission being appointed and the school being in consequence maintained as a separate foundation, he would reconsider the constitution of the governing body of the school so as to strengthen it on its industrial side with the view of establishing a connection between it and technological institutions of lower grades. In reply, Mr. McKenna said that no representations had reached him from the bodies principally concerned leading him to suppose that the consideration of this question is urgently desired, and that no commission would be appointed unless these representations were made.

The thirtieth annual meeting of the Institute of Chemistry was held on Monday, March 2, Prof. P. F. Frankland, F.R.S., president of the institute, being in the chair. In the course of his address the president dealt with the difficulties of students in deciding the most advisable method of preparing for admission to the profession of chemistry. He is convinced that the usual three years' curriculum is wholly inadequate, for whilst the ground to be covered in the study of chemistry has attained colossal dimensions compared with what it was twenty-five years ago, and is continually being extended, the student's time is no more protracted than before. The limited time at the disposal of the student gives him little opportunity to take proper advantage of the excellent equipment now to be found in the universities and colleges, and teachers are aware of the urgent necessity of increasing the minimum length of the curriculum prior to graduation, but no university appears to have the courage to initiate this reform. In the matter of students, it is quality, not quantity, that universities require, for every science student is a net loss financially, and the work of the classes is too often hampered by a large proportion of undesirables.

The Board of Education has published (Cd. 3885) the reports from those universities and university colleges in Great Britain which participated during the year ended March 31, 1907, in the annual Parliamentary grant, now amounting to 100,000*l.* The reports deal with the work of the colleges during the year 1905–6, and appear to be reprinted just as they were received by the Board of Education. The information is arranged, it is true, under headings prescribed by the Board, such as land and buildings, staff and educational work, students, fees, finance, and so on, and it is possible with much labour to institute comparisons between the various institutions. The usefulness of the Blue-book would be increased greatly if, following the practice adopted in many other of the Board's publications and the custom which is fairly general in American volumes of a similar kind, the statistics relating to the various colleges were summarised and the totals obtained for the different institutions classified and compared. It would then be possible to coordinate the facts, and to say, for instance, how the interest in higher education in the north of England compares with that in the Midlands or in Wales. If some such plan were adopted much greater use would be made of what would then be an interesting and serviceable volume.

The interim report for the period January 1 to September 30, 1907, submitted on February 25 last to the trustees by the executive committee of the Carnegie trust for the universities of Scotland, gives information concerning the allocation of grants during that period. The publication of this interim report, dealing only with nine months, was necessitated by an alteration of the financial year of the trust to bring it into line with the academic year of the universities. Sums amounting to 22,000*l*. have been handed over to the four Scottish universities during the nine months, bringing the total expenditure in this direction, since the inauguration of the first quinquennial scheme of grants in January, 1903, to 156,489*l*. The conditions which will regulate the second quinquennial distribution are under the consideration of a special subcommittee, and will, it is hoped, be published shortly. The total expenditure for 1906–7 under the scheme of endowment of post-graduate study and research was 7004*l*., and the estimated expenditure for the current academic year is 7615*l*. The expenditure upon fees for the summer session, 1907, amounted to 11,685*l*. The proposed scheme of inclusive fees, that is, that in each faculty a beneficiary of the trust should be granted all such instruction as it is desirable for him to receive in his course for a degree on the payment of one fee for each academic year, is still under discussion. Numerous appendices to the report provide detailed information as to the different items of expenditure.

SOCIETIES AND ACADEMIES.

London.

Royal Society, December 12, 1907.—"Further Consideration of the Stability of the Pear-shaped Figure of a Rotating Mass of Liquid." By Sir G. H. **Darwin**, K.C.B., F.R.S.

In vol. xvii., No. 3 (1905), of the Memoirs of the Imperial Academy of St. Petersburg, M. Liapounoff has published an abstract of his work on figures of equilibrium of rotating liquid. In this paper he explains how he has obtained a rigorous solution for the figure and stability of the pear-shaped figure, and he pronounces it to be unstable. In a paper in the Philosophical Transactions (vol. cc., A, pp. 251–314) the present author arrived at an opposite conclusion.

The stability or instability depends on whether the sign of a certain function is negative or positive.

M. Liapounoff attributes the disagreement to the fact that the author only computed a portion of an infinite series, and only used approximate forms for the elliptic integrals involved in the several terms. He believes that the inclusion of the neglected residue of the infinite series would lead to an opposite conclusion.

In the author's computation the critical function is decisively negative, whilst M. Liapounoff is equally clear that it is positive. The inclusion of the neglected residue of the series, which forms part of the function, undoubtedly tends to make the whole function positive, but after making the revision it remained incredible, at least to the author, that the neglected residue should amount to the total needed to invert the sign.

The analysis of his former investigation was re-examined throughout, and the computations were repeated by improved methods. The same method was also applied to the investigation of Maclaurin's spheroid, where the solution could be verified by the known exact result.[1]

Dissent from so distinguished a mathematician as M. Liapounoff is not to be undertaken lightly, and therefore especial pains were taken to ensure correctness. The author states his conviction that the source of the disagreement is to be found in some matter of principle, and not in the neglected residue of this series.

Entomological Society, February 5.—Mr. C. O. Waterhouse, president, in the chair.—*Exhibits*.—Dr. T. A. **Chapman**: A collection of butterflies made last summer at Gavarnie, in the Pyrenees, including a number of specimens of *Erebia lefebvrei*, with *E. melas* from south-east Hungary, for comparison.—H. St. John **Donisthorpe**: Eleven species of ants taken in the hot-houses in Kew Gardens in December, 1907, and January, 1908, eight being new to the published Kew list, and six species not before recorded as introduced in Britain.—J. E. **Collin**: Microscopically mounted specimens of the gnat *Epidapus scabiei*, Hopk., a potato pest in the United States recently discovered in England attacking narcissus bulbs.—A. H. **Hamm**: Very young larvæ of *Bitaris muralis*, hatched in captivity, the natural place of deposit of these eggs being at the entrance to the burrow of the bee, *Anthophora pilipes*, in stone walls near Oxford.—Commander **Walker**: Two specimens of the rare *Pyralis lienigialis*, Zell, ♀, taken at light in his house at Summertown, August, 1906, and 1907.—R. E. **Turner**: A box of Thynnidæ from South America, mostly from Chile, with several new species from Mendoza and the Peruvian Andes.—Prof. T. Hudson **Beare**: A specimen of *Trachyphlaeus scabriculus* taken at St. Margaret's Bay in August, 1907, with the two deciduous mandibles still in place.—Lieut.-Colonel **Manders**: The ♀ of *Papilio phorbanta* from Bourbon, an aberrant member of the Nireus group of Papilios, compared with the other members of the same group from the African mainland, Madagascar, and Mauritius. It was pointed out that whereas in all the other species the ♀♀s were some shade of green similar to the ♂♂s, the Bourbon insect was more or less uniformly brown. It was suggested that this was due to mimicry, *Euplaea goudoti*, a species strictly confined to Bourbon, being the model.—Hon. Walter **Rothschild**: Interesting papilionids; (1) *Troides alexandrae*, Rothsch., remarkable for the beauty of the ♂ and the gigantic size of the ♀, a new discovery by A. S. Meek, who found this fine insect in the north-eastern portion of British New Guinea at some distance inland from the coast; (2) a gynandromorphic specimen of Troides, the only one known of this genus, obtained by Dr. L. Martin in South Celebes. It belongs to *T. haliphron*, the left side being ♀ and the right side ♂.—R. **Adkin**: Bred specimens of *Tortrix pronubana*, Hb., to demonstrate that the species is continuously brooded.—L. W. **Newman**: Long series of *Melitaea aurinia* and *Notodonta chaonia* from various localities in the United Kingdom to illustrate the wide superficial variation of the respective species.—Dr. F. A. **Dixey**: Specimens of *Nychitona medusa*, Cram., and *Pseudopontia paradoxa*, Feld.—*Papers*.—(1) Two diplopterous Hymenoptera from Queensland; (2) notes on Thynnidæ, with remarks on some aberrant genera of the Scotiidæ: R. E. **Turner**.—Diaposematism, with reference to some limitations of the Müllerian hypothesis of mimicry: G. A. K. **Marshall**.

Zoological Society, February 18.—Dr. Henry Woodward, F.R.S., vice-president, in the chair.—A series of specimens of internal parasites obtained from animals recently living in the society's gardens: Dr. L. W. **Sambon**. Stress was laid on the important additions to knowledge to be derived from an adequate investigation of such material, and on the practical results to the health of the animals in the gardens that might be expected.—The inheritance of colour in domestic pigeons, with special reference to reversion: R. **Staples-Browne**. A series of skins was exhibited illustrating some experiments upon which the communication was based. Crosses had been made between black barbs and white fantails. The F1 generation was black with some white feathers. In the F2 generation, among other forms, blacks and whites were obtained, and also some blues. Blues were found to be dominant to whites, but blacks were dominant, or rather "epistatic," to the blues, which accounts for the fact that the reversionary form does not appear until the F2 generation. When two blues of the F2 or later generations were mated together blacks were never obtained again. A white in F2 mated to a fantail gave whites only. A second series of skins illustrated a cross between a white tumbler and a white fantail. Some white birds splashed with red had figured in the ancestry of the tumbler, although the bird itself showed no trace of colour. In the F1 generation such splashed kinds occurred, which, when mated together, gave in F2 birds which were red and white with some distinct blue feathers. Possibly the white tumbler was a dominant white.—Mammals collected by Mr. M. P. Anderson during a trip to the Mongolian Plateau, N.W. of Kalgan: O. **Thomas**. Nine species were mentioned, of which two were described as new. The paper formed the

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[1] Amer. Math. Soc. Trans., 1903, vol. iv., p. 113, on "The Approximate Determination of the Form of Maclaurin's Spheroid," and a further note on the same subject, recently sent to the same society.